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Ultrasound and adnexal pathology: what is the evidence?

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Conflicts of Interest

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Amor et al. suggest that all adnexal masses should be evaluated by an expert ultrasound examiner, because this ultrasound method results in a correct diagnosis of malignancy with a specific presumed histology in many cases.

Because an expert is not always available, we have developed methods intended for use by non-expert ultrasound examiners to help them correctly classify adnexal masses as being malignant or benign. One of these methods is the Simple Rules Risk system.[1] The ultrasound features used in this model are the same as those used in the Simple Rules, which perform well in the hands of non-experts.[2] Therefore, the Simple Rules Risk system is likely to perform equally well in the hands of non-expert users.

We agree that it is not necessary to apply risk prediction models to all adnexal masses, because many tumors exhibit characteristic ultrasound features which make them easy to recognize. This strategy corresponds to our Easy Descriptors, which can be used by examiners with limited ultrasound experience.[2] The statement by Amor et al. that the Easy Descriptors have an accuracy of 43% is incorrect. When used by non-experts they were applicable in 46% of tumors and when applicable they had 93% sensitivity and 97% specificity.[2] A strategy of first using the Easy Descriptors and then using a risk prediction model such as the Simple Rules Risk system as a second step has good diagnostic performance.[3]

It is surprising that Amor et al. criticize our risk prediction model, because their own Gynecological Imaging Reporting and Data System (GI-RADS) is based on the estimated risk of malignancy. For example, their study includes 184 GI-RADS grade 3 patients (with an estimated risk of malignancy of 1-4%), of whom 182 underwent surgery to detect only one case of malignancy.[4] To the best of our knowledge, GI-RADS has not been tested in the hands of non-experts.

In the ongoing IOTA phase 5 study we investigate the behavior of adnexal masses in long-term follow-up, including the risk of complications. Only when the results of this study are available,

an algorithm for clinical management of all types of adnexal pathology can be developed. Once taken up by (inter)national guidelines, this should result in a reduced number of surgical procedures for benign disease (and the entailed risks and costs) and appropriate referral to gynecological oncologists in case of malignant disease.

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